

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
25 March 2004 (25.03.2004)

PCT

(10) International Publication Number  
**WO 2004/024879 A3**

(51) International Patent Classification<sup>7</sup>: **G01N 33/00, 33/53, 33/567, C12Q 1/00**

(74) Agents: SHAYESTEH, Laleh et al.; Exelixis, Inc., P. O. Box 511, 170 Harbor Way, South San Francisco, CA 94083-0511 (US).

(21) International Application Number:

PCT/US2003/028897

(22) International Filing Date:

15 September 2003 (15.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/411,010 16 September 2002 (16.09.2002) US

(71) Applicant (*for all designated States except US*): EX-ELIXIS, INC. [US/US]; P.O. Box 511, 170 Harbor Way, South San Francisco, CA 94083-0511 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): FRANCIS-LANG, Helen [GB/US]; 1782 Pacific Avenue, Apt. 2, San Francisco, CA 94109 (US). FRIEDMAN, Lori [US/US]; 113 Arundel Road, San Carlos, CA 94070 (US). KIDD, Thomas [GB/US]; 643 Lake Street, San Francisco, CA 94118 (US). ROCHE, Siobhan [IE/IE]; 30 Moatfield Park, Coolock, Dublin 5 (IE). ZHANG, HaiGuang [US/US]; 4833 El Grande Place, El Sobrante, CA 94803 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:  
15 July 2004

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

WO 2004/024879 A3

(54) Title: RORs AS MODIFIERS OF THE p21 PATHWAY AND METHODS OF USE

(57) Abstract: Human ROR genes are identified as modulators of the p21 pathway, and thus are therapeutic targets for disorders associated with defective p21 function. Methods for identifying modulators of p21, comprising screening for agents that modulate the activity of ROR are provided.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US03/28897

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC(7) : G01N 33/00, 33/53, 33/567; C12Q 1/00  
 US CL : 800/3; 435/4, 7.1, 7.2, 7.21

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 800/3; 435/4, 7.1, 7.2, 7.21

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 Please See Continuation Sheet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,E	STEHLIN-GAON, C. et al. All-trans retinoic acid is a ligand for the orphan nuclear receptor RORB. Nature Structural Biology. October 2003, Vol. 10, No. 10, pages 820-825, see entire document.	1-25
A	WIESENBERG, I. et al. Specific activation of the nuclear receptors PPAR $\gamma$ and RORA by the antidiabetic thiazolidinedione BRL 49653 and the antiarthritic thiazolidinedione derivative CGP 52608. Molecular Pharmacology. 1998, Vol. 53, pages 1131-1138, see entire document.	1-25

<input type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input type="checkbox"/>	See patent family annex.
*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

29 December 2003 (29.12.2003)

Date of mailing of the international search report

26 APR 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 Facsimile No. (703)305-3230

Authorized officer

Peter Paras, Jr.

Telephone No. 703-308-1123

**INTERNATIONAL SEARCH REPORT**

PCT/US03/28897

**Continuation of B. FIELDS SEARCHED Item 3:**  
WEST, MEDLINE, BIOSIS, EMBASE, SCISEARCH, CAPLUS